Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

Claims 1-31 (canceled)

Claim 32 (new): A method for producing zinc sulfide electroluminophores comprising:

a. preparing a fine-grain zinc sulfide by precipitating zinc sulfide from solutions of zinc salts and H_2S;

b. mixing the obtained fine-grain zinc sulfate with activator and coactivator compounds to form luminophores;

c. firing the obtained mixtures in a temperature range of from 800 to 1000°C in the presence of fluxing agents selected from the group consisting of fluorides, bromides, iodides, and mixtures thereof to obtain a powdery electroluminophore;

d. treating the powdery electroluminophores with acid selected from the group consisting of organic acids, inorganic acids, and mixtures thereof in an acid bath while stirring.

Claim 33 (new): The method according to claim

32 further comprising washing, neutralizing, and optionally filtering and drying the zinc sulfide electroluminophores.

Claim 34 (new): The method according to claim 32 wherein fine-grain zinc sulfide is precipitated by passing H2S into a solution of zinc salt.

C2

Claim 35 (new): The method according to claim 34 wherein the zinc salt solution is selected from the group consisting of solutions of $ZnSO_4$, $Zn(NO_3)_2$ and $ZnCl_2$.

Claim 36 (new): The method according to claim 34 wherein the zinc ion concentrations in the zinc salt solutions ranges from 0.25 moles/L to 2.0 moles/L at temperatures between 20 and 80°C and a pH of 0.5 to 3.0.

Claim 37 (new): The method according to claim 32 wherein the activator and coactivator compounds are mixed with the zinc sulfide during precipitation of the fine grain zinc sulfide or immediately after the precipitation is completed.

Claim 38 (new): The method according to claim 32 wherein the activator and coactivator compounds are blended together in dry form, initially with a portion of the fine-grain zinc sulfide obtained from the precipitation step, and then this mixture combined with the remaining amount of fine-grain zinc sulfide.

Claim 39 (new): The method according to claim

37 wherein the added activator and coactivator compounds are selected from the group consisting of copper sulfate, tetrachloroauric acid, the sodium salt of tetrachloroauric acid, manganese sulfate, aluminum nitrate, and mixtures thereof.

C2

Claim 40 (new): The method according to claim 32 wherein a slightly mineralizing fluxing agent selected from the group consisting of fluorides, bromides, iodides, and mixtures thereof, is added to the starting mixture for the firing process, which fluxing agent contains cationic components that act as coactivators.

Claim 41 (new): The method according to claim 40 wherein the firing in step (c) takes place in air or in an inert nitrogen atmosphere or in an atmosphere consisting of a gas mixture of nitrogen and 1 to 10% hydrogen.

Claim 42 (new): The method according to claim 41 wherein the obtained fired material is cooled to room temperature after completing of the firing step, washed with deionized water, and optionally filtered and dried.

Claim 43 (new): The method according to claim 34 wherein the acid treatment in step (d) takes place in an acid bath with acids selected from the group consisting of organic acids and inorganic acids, with

retention times of 10 minutes to 10 hours at temperatures between 20 and 60°C.

Claim 44 (new): The method according to claim 43 wherein the acids are selected from the group consisting of acetic acid, citric acid, hydrochloric acid, nitric acid, and sulfuric acid.

C2 Cont

Claim 45 (new): The method according to claim 44 wherein the acid treatment takes place with approximately 37% HCl solution for 2 to 6 hours while stirring at room temperature.

Claim 46 (new): The method according to claim 44 wherein the acid treatment takes place with a citric acid solution of 10 to 20% citric acid for 4 to 8 hours at 60°C with stirring.

Claim 47 (new): The method according to claim 33 wherein after the zinc sulfide is washed, neutralized and optionally filtered and dried, the zinc sulfide is re-doped with the activator and coactivator compounds.

Claim 48 (new): The method according to claim 47 wherein the re-doping is effected with compounds selected from the group consisting of copper compounds, gold compounds, manganese compounds, and mixtures thereof as activator compounds, and aluminum compounds as coactivator compounds.

Claim 49 (new): The method according to claim

47 wherein the compounds used for re-doping are selected from the group consisting of copper sulfate, tetrachloroauric acid, sodium salt of tetrachloroauric acid, sulfate, aluminum nitrate, and mixtures thereof.

Claim 50 (new): The method according to claim 47 wherein re-doping takes place by firing at a temperature of from 320°C to 800°C for a period of from 32 minutes to 10 hours.

Claim 51 (new): The method according to claim 47 wherein re-doping takes place in air or in an inert nitrogen atmosphere consisting of a mixture of nitrogen and 1 to 10% hydrogen.

Claim 52 (new): The method according to claim 47 wherein the fired zinc sulfide is cooled to room temperature, washed with a solution selected from the group consisting of mineral acids, KCN, and mixtures thereof to remove any activator or coactivator materials that may have precipitated onto the surface of the zinc sulfide electroluminophores.

Claim 53 (new): The method according to claim 52 wherein the zinc sulfide electroluminophores are washed to pH neutrality with deionized water and subsequently filtered and dried.

Claim 54 (new): The method according to claim

34 wherein the electroluminophores produced are annealed at a temperature in the range of from 200 to 500°C for a period of from 32 minutes to five hours.

Claim 55 (new): The method according to claim 54 wherein the annealing takes place in air or in an inert nitrogen atmosphere or in an atmosphere consisting of a mixture of nitrogen and 1 to 10% hydrogen.

Claim 56 (new) Zinc sulfide electroluminophores which have a cubic crystal structure and average grain sizes of from 2 to 5 microns.

Claim 57 (new): Zinc sulfide electroluminophores which have a cubic crystal structure and average grain sizes of from 5 to 15 microns.

Claim 58 (new): The zinc sulfide electroluminophores according to claim 56 wherein the particles are coated with a protective layer of a substance selected from the group consisting of organic, crystalline inorganic, amorphous inorganic, and mixtures thereof.

Claim 59 (new): The zinc sulfide electroluminophore according to claim 58 wherein the protective layer consists of an inner metal oxide film and an outer silicon nitrate film.

Claim 60 (new): A screen printing ink

comprising particles of a zinc sulfide electroluminophore according to claim 56 dispersed in the screen printing ink.

Claim 61 (new): An ink composition containing electroluminophore particles according to claim 56 dispersed in the ink, wherein the ink is selected from the group consisting of halftone photogravure ink, flexographic printing kin, offset printing ink, letterset printing ink, and gravure printing ink.

Claim 62 (new): A thermal transfer film containing zinc sulfide electroluminophore particles according to claim 56.

Claim 63 (new): Thermoplastic granules containing zinc sulfide electroluminophores according to claim 56 wherein said zinc sulfide electroluminophores are embedded in the matrices of the thermoplastic granules and are processed into films by means of extrusion, coextrusion, or thin film casting.

Claim 64 (new): Zinc sulfide crystals prepared by the method according to claim 32.